DOCUMENT RESUME

ED 160 266 RC 010 731

AUTHOR Hirschman, Charles; Aghajanian, Akbar
TITLE Women's Labor Force Participation and Socioeconomic Development: The Case of Peninsular Malaysia, 1957-1970.
PUB DATE Aug 78
NOTE 42p.; Paper presented at the Annual Meetings of the Rural Sociological Society (San Francisco, California, August, 1978)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Academic Achievement; Agricultural Laborers; *Developing Nations; Economic Development; *Ethnic Groups; Indians; Longitudinal Studies; *Marital Status; *Place of Residence; Rural Urban Differences; Social Change; Social Development; *Working Women
IDENTIFIERS Chinese People; Malayans; *Malaysia

ABSTRACT

Using 1957 and 1970 census data, four independent variables were used to explore determinants and constraints of Malaysian women's participation in the modern sector: ethnic community, educational attainment, size of place of residence, and marital/family status. Women's labor force participation increased as agricultural employment declined and a sizeable growth in non-agricultural employment emerged; the pattern was consistent with the growth and direction of change in the Malaysian economy over the same period. About one third of women in each of three major ethnic communities (Malay, Chinese, and Indian) were employed, but they had rather distinctive patterns of type of work. Malay women tended to work in traditional agriculture, Indian women worked in modern agriculture, and Chinese women had a more diversified structure, with over half working in the modern non-agricultural sector. Single women were generally found in the modern non-agricultural sector, while most other women worked in agriculture. Rural areas provided agricultural employment, both in the family and wage sectors. Women in larger towns and cities were predominantly found in the modern non-agricultural sector. Women with the least education tended to work in the agricultural sector and those with the most education were found in the modern non-agricultural sector. Higher education appeared to provide aspirations and credentials that enabled women to find modern sector employment that was largely independent of access to jobs (residence) or family obligations. (ER)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

rec'd 2-70-78

- ED160266

WOMEN'S LABOR FORCE PARTICIPATION AND SOCIOECONOMIC DEVELOPMENT: THE CASE OF PENINSULAR MALAYSIA, 1957 - 1970[1]

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Charles Hirschman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Charles Hirschman
Department of Sociology
Duke University
Durham, North Carolina 27706

and

Akbar Aghajanian
College of Arts and Sciences
Pahlavi University
Iran

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

RC 010731

Paper Presented at the Annual Meetings of the Rural Sociological Society, San Francisco, August, 1978

WOMEN'S LABOR FORCE PARTICIPATION AND SOCIOECONOMIC DEVELOPMENT: THE CASE OF PENINSULAR MALAYSIA, 1957 - 1970

The changing role of women's economic activities in developing countries is a topic of particular importance, not only because women represent a significant resource of much underutilized labor in the non-household sector, but also because women's activities are intimately tied to the structure of the family. Low levels of female participation in the labor force suggest that much of the potential human talent and skills in a society are restricted to household endeavors. For both the objectives of eliminating discrimination against women in employment and expanding the pool of human resources for development, there is a growing scientific and policy interest in the study of socioeconomic development and women's labor force participation. Of considerable interest is the relationship between women's economic roles and fertility. While the causal structure of this relationship is still an unresolved topic, there is a basic consensus that the transition from high to low fertility levels is closely intertwined with the changing social and economic roles of women.[2]

In spite of these concerns, there are only a handful of empirical studies of trends in women's labor force participation in developing countries. The major factor accounting for this dearth of studies has been the lack of comparable time-series data in most developing countries. Moreover, the difficulties of accurately measuring the often multidimensional economic activities of women compound the problems of comparability of different data sources. While the possibility of cross-national analysis as a surrogate for longitudinal study is instructive, the inference of secular trends and the relationships to developmental

processes must always be tentative.

This study analyzes changes in labor force participation of women, in both the agricultural and non-agricultural sectors in Peninsular Malaysia, based upon 1957 and 1970 census data. By examining patterns among the three major ethnic communities of Malays, Chinese, and Indians, it is possible to have both a comparative and trend analysis. The richness of the 1970 census data, available in a two percent sample tape, makes possible a rather detailed examination of the determinants of and constraints on women's participation in the modern sector.

Economic Development and Female Labor Force Participation

The conventional hypothesis is that labor force participation of women increases during the course of socioeconomic development. This hypothesis is largely informed by the historical experience of some Western countries over the last century, though the upward trend of women in the labor force has not been linear or even continuous.[3] The expected relationship of higher women's labor force participation (outside the home) as a result of development is given further credence by the evidence from cross-sectional studies that compare the more and less developed countries.[4] A somewhat different formulation is that the trend during economic development follows a U-shaped pattern, with women's participation rates first falling and then rising during the latter stages of the developmental process.[5] The initial drop in participation is due to a decline in agricultural work, while the latter rise occurs as the modern sector expands.

However, detailed empirical analyses of both cross-sectional and longitudinal data have not found unequivocal support for any hypothesis that female labor force participation is a simple function of economic

development.[6] In the most comprehensive comparative study to date, Durand finds modest support for the first part of the U-shaped hypothesis, that women's activity rates declined in the early stages of economic development, but finds no consistent patterns among countries at medium and at higher levels of development.[7]

There seem to be many other factors that also determine the extent of women's labor force activities in any society, particularly those related to the nature of family organization and cultural values regarding women's roles. For instance, the socio-cultural context of the family and women's roles in Latin America and the Middle East appear to be almost polar opposites, and this is also reflected in their levels of women's labor force activities, in spite of comparable levels of economic development.[8] Yet other than providing post-hoc explanations for empirical differences, the cultural hypothesis does not lead to greater understanding of societal differences, for the basic question of the determinants of cultural orientations as well as their inter-relationships to socioeconomic change are unresolved.

In this analysis, we observe the changing levels of women's labor force activities in Peninsular Malaysia and their variance between ethnic communities. The differences between ethnic groups only seem partially due to differential opportunities for work, yet we remain skeptical about cultural orientations as the major explanation of ethnic differences in the economic roles of women.

Peninsular Malaysia: Socioeconomic Development and Ethnic Composition

Malaysia, one of the new states of Southeast Asia, was formed in 1963 by the federation of the independent nation of Malaya with the

British colonies of Singapore, Sabah, and Sarawak, the last two being states on the island of Borneo, about 400 miles from the Malaysian Peninsula. After a political dispute, Singapore left Malaysia in 1965 and became a separate nation. Malaya, now known as Peninsular Malaysia, had a population of 8.8 million in 1970, which was about 84 percent of the total population of Malaysia.[9]

The rate of socioeconomic progress of Malaysia has been considerable over the postwar era, especially since Independence in 1957. With the exception of the city-states of Hong Kong and Singapore, Taiwan, and the modern nation of Japan, Malaysia was the most affluent nation in Asia with a per-capita GDP of U.S. $570 in 1973.[10] This favorable economic situation rests in part on the historical legacy of being the world's leading producer of natural rubber and tin ore, but also on a concerted effort in recent decades to diversify the economic base into other areas, including industrialization.[11]

These economic changes have influenced the labor force participation of women in two ways, directly by affecting the demand for labor, both in number and composition, and indirectly by abetting the general forces of modernization. This later influence may work by making it more acceptable for young women to seek wage employment. To provide some concrete evidence on these changes in the economic structure, Table 1 shows the growth and shift in economic production of Peninsular Malaysia from 1960

Table 1 About Here

---

to 1970 (measured by gross domestic product, GDP, at factor cost). The Malaysian economy grew by two-thirds over this ten-year period, implying

an average annual growth rate of over five percent. This above average economic growth was accompanied by a substantial amount of sectoral redistribution. Manufacturing was the most dynamic sector, almost doubling in size, while agriculture grew at a much slower rate and declined proportionately from 41 to 29 percent of GDP. Of course, changes in economic production are not exactly paralleled by changes in the demand for labor, especially with much of the industrialization in Peninsular Malaysia, as in other third world countries, being of a capital intensive nature. Nonetheless, there have been proportional shifts in the sectoral distribution of labor from the primary to the secondary and tertiary sectors.[12] In the subsequent analysis, we will measure the changing employment of women in agricultural and non-agricultural activities during this period when the economy has experienced both growth and structural change.

Peninsular Malaysia is a plural society, par excellence, with slightly over half the population consisting of Malays, generally considered the indigenous population, while over a third of the population is Chinese, and more than ten percent is Indian. These ethnic divisions are the major categories of a census classification of "communities" which is reported subjectively by respondents and based upon a combination of national origin, language, religion, and cultural criteria. While the Malaysian peninsula has historically had a heterogeneous population as a result of her geographical position along major Asian trading routes, the plural society of today is largely due to the substantial numbers of immigration from China and India from the middle of the 19th century through the early decades of the 20th. Attracted by the opportunities for wage labor in the growing rubber and tin industries of the colonial economy, most

immigrants planned on only temporary residence, but a substantial number settled and became permanent residents. Since immigration has been restricted since World War II, the overwhelming majority of ethnic Chinese and Indians are second generation or longer residents of Malaysia.

Among the ethnic communities there are substantial cultural and socioeconomic divisions that have narrowed only slightly over the years.[13] To illustrate some of the basic demographic and socioeconomic differences, Table 2 presents some basic characteristics from the 1970 Census of

---

Table 2 About Here

Population and other national data sources. In general, Chinese are more likely to live in urban areas and to have a more diversified occupational structure than the Malay population. Only about one-forth of the Chinese men work in the agricultural sector, while almost two-thirds of Malay men do. On most characteristics, but not all, Indians are intermediate between the Chinese and Malay populations. One important difference in the rural-agricultural sector between the ethnic communities needs to be noted. Most Malay agriculturalists are peasant farmers (some as tenants) living in rural villages, whereas a high proportion of Chinese and especially Indian agricultural workers are wage laborers on large agricultural (rubber, oil palm, etc.) estates.

According to the simple economic development hypothesis, one would expect Chinese women, as the most urbanized, to have the highest labor force participation rates, and the Malays the lowest. But our findings reveal a complicated picutre of trends and differentials, that can only

partially be explained by the standard theoretical expectations.

Past Research on Women's Labor Force Activity in Peninsular Malaysia

Prior research on the labor force activities of women in Malaysia has been greatly limited by the availability of data. The 1957 Census was the first to publish data on activity rates by age-group, which is almost a pre-requisite for any detailed analysis of labor force patterns. In the most comprehensive study based on the 1957 Census (with some comparisons with the 1947 Census and the 1962 Survey of Employment) Gavin Jones examined variations in women's participation rates between the three ethnic communities, using states (there are eleven states) as a surrogate measure for urban-rural differences.[14]

Jones noted significant variations in the labor force participation rates among the three major ethnic communities that could not simply be explained by differential rural-urban residence. The highest activity rates were among Indian women, perhaps explained by the high proportion of the Indian population living on agricultural estates that offer wage employment opportunities to women. There appears to have been a moderate decline in the Indian participation rate from 1947 to 1957, although it still remained above the Malay and Chinese levels in 1957. Jones suggests that this decline was due to gradual urbanization among the Indian population. The overall participation rates of Chinese and Malay were fairly close, but there were quite different age patterns and rural-urban differences. Chinese women have an age profile of labor force activity that is typical of industrial countries, with peaks around age 20 and 50, but a trough during the childbearing years. The activity rates of Chinese women did not seem to vary systematically between states in terms of rural-urban composition or levels of agricultural activity. The economic

role of Malay women seemed closely tied to agriculture, with participation rates highest in the rural states. Jones speculated that female participation rates would decrease in the coming years as the population became more urbanized, although the rates of young women might rise as urban employment opportunities increase.

The only other major analysis of women's labor force participation in Malaysia was by Monica Fong,[15] who analyzed census data from 1921 to 1957. She measured differential trends in the overall female activity rate by ethnic community and state, and correlated aggregate activity rates with other demographic characteristics at the state level. Fong concluded that there has been a general decline in the women's labor force activity rates for each ethnic community from 1921 to 1957 in both the agricultural and non-agricultural sectors, although the Chinese activity rates turned upward slightly from 1947 to 1957. However, lack of age-specific labor force data prior to 1957, and the problems of comparability of measurement between Malaysian censuses made any interpretation of trend somewhat tentative.

The studies of Jones and Fong lend support to Durand's generalization of declining female labor force participation in the early stages of economic development -- prior to 1957 in Peninsular Malaysia (with the small rise among Chinese women from 1947 to 1957, supporting the second half of the U-shaped empirical expectation). Before appraising the post 1957 changes, it is necessary to review the available data sources, namely the 1957 and 1970 Censuses.

Malaysian Census Data and Labor Force Measures

Our trend analysis is based upon the 13-year period from the 1957 Census to the 1970 Census; inasmuch as Malaya received formal independence

in 1957, the intercensal period also represents the first 13 years of Independence. Our use of the 1957 data is limited by the detail of the tabulations in published census reports,[16] while more flexibility is possible with the .02 random sample of the 1970 Census,[17] available on magnetic tape. The .02 file sample of the 1970 Census is only available for Peninsular Malaysia, which is equivalent to the old Federation of Malaya in the 1957 Census. Evaluations of the coverage of both censuses provide confidence that the enumerations were quite comprehensive, and probably much above the average quality and completeness of census data from other developing countries.[18]

The measurement of the labor force concept is always problematic, especially for women in rural areas of developing countries. The roles of homemaker and unpaid family worker in agriculture are difficult to distinguish, and labor force measures may vary considerably depending on the exact question wording in the census or survey. This is particularly a problem in assessing temporal change with two or more censuses or surveys. There were differences in the labor force measures in the 1957 and 1970 Censuses that may bias the measurement of change. The 1957 Census used a modified labor force measure with an activity reference period of the last year. The labor force consisted of "all persons who had been gainfully occupied for at least four months out of the preceding twelve months, part-time workers who averaged at least three hours a day...and persons who have been in employment for less than four of the preceding twelve months, but who have been actively looking for work for at least six of the twelve months."[19] It seems that the obvious intent of the one-year reference period was to avoid the problem of seasonality, a particular problem for work in the agricultural sector. The 1957 Census

was taken in June, usually an off-season in rice cultivation -- a major activity of many Malay farmers. Jones[20] noted that the female participation rates based upon the 1957 Census seemed too low in comparison with the 1962 Employment Survey. Perhaps, some women in agriculture did not work the necessary four months to be classified as employed, or may have been inaccurately classified in terms of current activity rather than the one-year reference period.

The 1970 Census used a standard labor force measure, based upon United Nation's recommendations that classified all persons working or looking for work during the preceding week as in the labor force. Unpaid family workers who worked three hours or more per day are included as in the labor force. The 1970 Census was taken in late August, which is an active season in rice cultivation. The measurement differences between the 1957 and 1970 Census labor force classifications have probably affected comparability, but do not, in our opinion, make it impossible. The major problem seems to be an underestimate of women working as unpaid family workers in agriculture in 1957. As we observe trends in the subsequent analysis, we will be sensitive to this measurement problem.

Overall Trend in Labor Force Participation

Figure 1 shows the age patterns of women's labor force participation rates in 1957 and 1970. The overall participation rate of women, age 15 to 64, rose from 31 percent in 1957 to 37 percent in 1970. Figure 1 shows that most of this increase occurred among younger women, especially among those in their twenties and early thirties. Among older women, there was little sign of change. The rise in participation rates of

Figure 1 About Here

younger women is congruent with the expectation of increased participation with economic development, but the flat age profile is typical of less industrialized area. An examination of ethnic group patterns reveals that Figure 1 is an average of quite divergent patterns and trends.

Figure 2 shows participation rates for the same two time points, 1957 and 1970, for the three major ethnic communities separately, Malays, Chinese, and Indians. These graphs show a very sharp drop in participation rates for Indian women at all ages, and a substantial rise in rates

---

Figure 2 About Here

---

for Malay women at all ages. For Chinese women, there were rises below age 40, but declines above that age. Although there was some convergence over time and virtually equivalent overall (age 15-64) participation rates (Malay, 37%; Chinese, 37%; Indians 36%) among the three ethnic communities, major differences remain in age specific patterns and in trends.

The increases among young Malay and Chinese women are interpretable as a response to the significant socioeconomic development during this period. As new employment opportunities occur in a growing economy, it seems most likely that young women will respond by joining the labor force in greater proportion than did their older sisters and mothers. Not only are younger women more likely to have higher educational qualifications, but they also may be less encumbered with family responsibilities that conflict with outside the home employment.[21] But the rise in labor force participation rates among older Malay women seems less explicable. We suspect these apparent changes may reflect measurement

differences in the two censuses, most likely an underestimate of women working on family farms in 1957.

The decline of labor force participation rates among Indian women at all ages reveals quite different social forces at work. The very high activity rates of Indian women in 1957 were due to the concentration of the Indian community on rubber plantations and other large agricultural estates, where jobs as rubber-tappers and laborers were available for women as well as men. But by 1970, this economic base for employment appears to have been cut dramatically. The overall participation rate was reduced by a third and the declines are evident at all ages. Other evidence also suggests that loss of employment on agricultural estates was the major factor behind this sharp drop in Indian female labor force participation. The Second Malaysia Plan notes that the estate labor force was reduced by one-fifth from 1962 to 1967.[22] Another sign of depressed economic circumstances among the Indian community is the sizeable number of Indian emigrants from Peninsular Malaysia from 1957 to 1970.[23]

These changes in labor force participation rates can be more clearly understood by decomposing changes in employment into agricultural and non-agricultural subdivisions.

Trends in Agricultural and Non-Agricultural Employment

The theoretical expectations about the relationship between socio-economic development and women's labor force participation are usually interpreted in terms of the type of employment. For instance, the U-shaped curve is based on the expectation that participation rates first decline as agricultural employment decreases, but subsequently rise,

as the modern non-agricultural sector expands. Table 3 shows the proportions of women employed in the agricultural and non-agricultural sector for each ethnic community for 1957 and 1970. The lower panel

Table 3 About Here

in Table 3 summarizes the 1957-1970 employment changes with percentage point differences between the two censuses, separately by ethnic community, sector, and age group.

Table 3 differs from Figures 1 and 2 in that the variable is the proportion employed, not labor force participation. Women that were reported to be employed but whose industry status was unknown were excluded from the denominator of all women in the calculation of the proportions employed in agricultural and non-agricultural sectors. This has the effect of distributing those with an unknown sector in the same proportions (agricultural and non-agricultural) as those with a known sector.

In 1957, almost half of Indian women were employed in the agricultural sector, reflecting the fact that almost all women living on rubber plantations were engaged in wage labor. Lesser fractions of Malay and Chinese women were working in agriculture; one quarter of Malay women age 15-64 and 17 percent of Chinese women in the same age range. In the non-agricultural sector, very few Malay and Indian women were employed (3 percent and 5 percent, respectively), while only a slightly larger proportion of Chinese women (12 percent) were at work in this sector.

By 1970, considerable changes had occurred for all three ethnic communities. The overall proportion in agricultural employment remained about the same among Malay women, but there were declines at the younger ages counterbalanced with increases among older women. The proportion of

Chinese women in agriculture declined modestly, while the Indian proportion dropped by almost half. There were marked increases in non-agricultural employment among all ethnic communities, especially for young women in their twenties.

These data suggest the structural mechanisms that underlie the changes in women's economic roles during the period from 1957 to 1970. The single strongest interpretation is the structural shift from agricultural to non-agricultural employment for young women. This secular trend, to be expected from the U-shaped curve hypothesis, is evident for all ethnic communities, though the magnitude of change varies considerably. The pattern is strongest for Chinese women, whose lead might be due their greater urbanization and access to modern sector employment. About a third of Chinese women in their earlier twenties were employed in non-agricultural employment in 1970 -- double their 1957 percentage.

A couple of other findings in Table 3 deserve some further comment. The rise in agricultural employment among older Malay women, we believe to be an artifact of measurement differences in the two censuses, namely an underestimate of unpaid family workers in 1957. There seems to be no social or economic change during this period that would have led to more women working in the peasant agricultural sector, if anything, the opposite might be expected.

The large reduction in agricultural employment among Indian women, however, is probably an accurate assessment, with wage employment presenting fewer problems of measurement comparability. The wholesale elimination of jobs on agricultural estates during the 1960s must have had a devastating effect on many Indian families. The attrition of

of jobs in commercial agricultural was experienced by young women entering adult life, but also among middle age women, who presumably had many years of job experience.

In spite of a common pattern of increased participation in non-agricultural employment among young women in all ethnic communities, there remains wide ethnic differences in levels and in the pace of change. Only 10 percent of young Malay and Indian women had modern (non-agricultural) employment in 1970, far lower than the Chinese figures. How are these differences to be explained? Do Chinese women have greater access and opportunities for work in the growing sectors of the economy or do Chinese women respond differentially to employment opportunities. Such a question cannot be addressed in a trend analysis because of the lack of detailed tabulations from the published 1957 Census reports. But with the 1970 sample census data, it is possible to investigate the relationship between various social, economic, and demographic characteristics and women's economic activities in a cross-sectional analysis. Such patterns may reflect some of the social changes underway among women's work in Malaysia.

Social Characteristics of Women and Type of Employment in 1970

With the .02 sample data file from the 1970 Census it is possible to examine the cross-sectional relationship between a variety of social and economic characteristics of women and their liklihood of being employed or in the labor force. These relationships may have changed over the years, but a snapshot picture (cross-sectional analysis) of the determinants of workforce behavior should indicate some of the most salient factors in the process of change.

In this analysis, we consider a more detailed classification of type of employment among women and four independent variables, Ethnic Community, Educational Attainment, Size of Place of Residence and Marital/Family Status. Our focus is exploratory in the sense that we only examine bivariate associations between the dependent variable and each of the independent variables. In the following section of the paper, we measure both the gross (bivariate) and net (holding other effects constant) effects of these independent variables on one type of employment activity among women.

The classification of women's employment used here consists of four categories that first divides the proportion employed into Agriculture and Non-Agriculture, and then divides both of these components into Traditional and Modern sectors. The Traditional-Modern distinction is based on the census variable Employment Status which is typically classified: Employer, Own Account Worker, Employee, and Unpaid Family Worker. We classify Employer and Employee as Modern and Own Account Worker and Unpaid Family Worker as Traditional. Traditional includes those employed within the household, either working for one's self with no employees, or as unpaid family assistant. The Modern sector includes those who work for wages for someone else or else those who hire others to work for wages (there are very few employers in the sample). Traditional Agriculture includes the peasant farming community, while Modern Agriculture is predominately the large agricultural plantations, although some small farmers may have employees. The Traditional Non-Agricultural sector contains the one-family businesses and petty traders and perhaps some independent producers or service workers. Modern Non-Agricultural

consists of all those who work for wages or employ others in commerce, manufacturing, services, construction or other industries. This category represents the expanding sector of employment as the urban economy develops. It seems unlikely that the factors that "cause" women to work will be the same for different types of employment.

Ethnic community contains the three major groups of Malays, Chinese, Indians, plus a residual group of Others (less than one percent of the population of all women — see the marginal proportions in the last column of Table 4).

Educational attainment is measured by the formal schooling completed. The first three categories are None, Primary (1-6 years of school), and Lower Secondary (7-9 years). The final category, LCE or Above, refers to those who have successfully passed a national exam, The Lower Certificate of Education, which is given at the end of nine years of schooling. Those who pass are eligible to go onto middle secondary schooling. The LCE credential is also important for employment in the lower rungs of government employment, including teaching. Less than ten percent of women, age 15-64, have passed the LCE (see Table 4), in fact, more than four of ten women have no schooling whatsoever. Our expectation is that education will increase both aspirations and qualifications for employment in the Modern sector.

Size of Place of Residence is a four-fold classification of the urban-rural continuum. It ranges from the largest cities of 75,000 or more to the smallest towns and rural villages of less than 1,000 population. Almost 60 percent of women live in this last, predominately rural category. Residence may shape women's work behavior in two ways, first

by proving access to jobs of certain types. Peasant agriculture is probably the only possible opportunity for most women in rural environments, while larger towns and cities offer a more diverse setting of employment opportunities. Additionally, in larger towns women may be freed from traditional customs that confine them to the household or household owned farms or enterprises.

Our last independent variable is a combination of marital and family status. Women are first divided into three marital statuses, never married, married, and formerly married (widowed, divorced, and separated). Then married women are sub-divided into those who have children and those who do not. This was done on the basis of a fertility question, and does not necessarily mean that dependent children are present in the household. Our expectation is that single women and married women without children have fewer family obligations and thus may be more inclined to seek employment. Formerly married women, because of economic need, may be somewhat likely to be employed than married women.

The associations between these four independent variables and type of employment are shown in Table 4. The sample is confined to women,

Table 4 About Here

age 15-64. More detailed tables by age group generally reflect the patterns found in these data. The first column contains the percentage of all women, age 15-64, who are employed, according to the conventional labor force criteria. The next four columns show sub-divisions of the

percentage employed, based upon the type of work classification (Traditional Agriculture, Modern Agriculture, Traditional Non-Agriculture, Modern Non-Agriculture). The last column shows the marginal frequencies of the independent variables among all women, age 15-64.

About one third of women in each of three major ethnic communities are employed, but they have rather distinctive patterns of type of work. The majority of employed Malay women work in Traditional Agriculture, reflecting the household basis of peasant agriculture. Similarly, most employed Indian women work in the Modern Agricultural sector as wage earners on plantations. Chinese women have a more diversified employment structure, but almost half are in the Modern Non-Agricultural sector. The very small Others community is composed of so many diverse groups (Thais, Eurasians, Europeans) that it is almost impossible to make any meaningful interpretations.

Educational attainment has opposite effects on employment in the different sectors. Women with the least education are most likely to work in the agricultural sector. But among women who have attended lower secondary schooling, and especially those with an LCE or above, employment in agriculture is very rare. Most women who are employed with these qualifications are found in the Modern Non-Agricultural sector.

A similar pattern is found for Size of Place of Residence and type of employment. Women in larger towns and cities are predominately found in the Modern Non-Agricultural sector, while rural areas provide agricultural employment, both in the family and wage sectors. It is impossible to sort out the two potential effects of urbanization, dif-

ferential opportunity structure and the normative mileau with the present data.

Marital/Family status is a measure of life cycle status and is closely related to the age of the woman. Single women are young, and most formerly married women are middle-aged or older. Thus, our variable which is designed to tap family obligations -- a demand that competes with outside the home employment — is closely intertwined with the effects of age and highly correlated variables, such as education. But the results are in the expected direction, although the differences are very small. Single women, and married women without children are slightly more likely to be employed than married women with children. And formerly married women are a bit more likely to be employed than married women. In terms of type of work, single women are generally found in the Modern Non-Agricultural sector, while most other women work in agriculture.

The results in Table 4 allow for several general observations. First, the major determinants of women's participation in the world of work are different, often in the opposite direction, for different sectors of the economy. The secular forces of urbanization, higher education, and later age at marriage are associated with modern non-agricultural employment, while agricultural employment is associated with the opposite criteria, low education, rural areas, and being married. The traditional non-agricultural sector seems to have little association with the background characteristics of women.

Thus the U-shaped curve hypothesis of the secular trend accurately points to the differential causes of women's labor force activity. But rather than try to measure the trend in the average of two different

proportions or to measure it's association with independent variables, it seems more realistic to separately examine the trend and determinants of the different types of work in a developing economy. In the next section, we consider both the bivariate and multivariate effects of these independent variables on a particular type of labor force behavior -- employment in the modern non-agricultural sector.

Multivariate Analysis of Social Characteristics of Women on Employment in the Modern Non-Agricultural Sector

We choose to examine the determinants of work in the modern non-agricultural sector (hereafter, modern sector) because it represents the growth pole of a developing economy. If women's labor force participation is to grow, it will be in this direction as the economy shifts from agriculture to industry and services and from family enterprises to bureaucratic organization.

Our objective is two-fold in the subsequent analysis, to first examine the effects of education, urbanization, and marital/family status on modern sector employment, controlling for the other variables, and secondly to compare ethnic variations in modern sector employment, holding constant the effects of these other structural variables. Table 5 shows the results of this analysis, with the gross and net effects of Educational Attainment, Size of Place of Residence, and Marital/Family Status on the percentage of women employed in the modern sector. The statistical technique used is multiple classification analysis, a form of multiple regression that allows for categorical independent variables. The universe of women in Table 5 consists of all women, age 15-64, who are not currently enrolled in school (past enrolled). The exclusion of those

currently enrolled in school makes possible a more accurate picture of the effect of higher education on employment (it also renders comparisons with Table 4 very difficult, because it included all women, age 15-64). The columns headed "gross" effects, show the bivariate associations, while "net" effect, shows the proportion of women employed in the modern sector, holding constant the effects of the other independent variables.

Table 5 About Here

Educational Effects

By excluding the currently enrolled, the effect of education on modern sector employment is even stronger than it appeared in Table 4. Over half of all women with an LCE credential work in the modern sector, while only five percent of women with no education do. Controlling for residence and marital/family status, the effect of education on modern sector employment is only modestly attenuated. Clearly higher education provides aspirations and credentials that enable women to find modern sector employment that is largely independent of access to jobs (residence) or family obligations.

The same general pattern is evident for Malay, Chinese, and Indian women. Chinese women are more likely to be employed in the modern sector at all levels of education, but the effect of education (measured by percentage point differences, or the eta and beta coefficients) is about the same. Does the remaining ethnic differential, within education levels, mean that Chinese women are more likely to respond to employment opportunities than Malay and Indian women (whose figures are about the same)? It may, although one might question whether all structural

variables, especially access to jobs, have been equally controlled across ethnic communities. With the predominance of Chinese employers in many urban areas, Chinese women may have some edge in employer preference (discrimination) or language ability that makes a difference. It is a possibility worth exploring.

Size of Place of Residence

There is a strong monotonic effect of Size of Place of Residence on modern sector employment as one goes up the urban hierarchy. It is not quite as strong as education, but it is substantial, and is only slightly reduced as other variables are controlled. Since there are more modern sector employment opportunities available in the largest cities, the results come as no surprise. Whether urban areas break the "cake of custom" of belief that women belong in the household is not directly testable with these data. However, the observation that urbanization is an equally powerful variable for all three ethnic communities, with quite different cultural values, suggests that urbanization is a liberating force in terms of women's economic roles.

The ethnic differentials within categories of Size of Place of Residence are really quite modest, and it would be difficult to support a hypothesis of differential cultural values on women's roles on the basis of these figures.

Marital/Family Status

The last independent variable, Marital/Family Status also has a strong effect, although patterns vary considerably with controls for other variables and across ethnic communities. Being single is by far, the most important life cycle status in determining whether a woman works in the

modern sector. The effect is reduced with the other controls (probably due to joint association of young age with higher education), but it still remains significant. The modest distinction between married without children, and married with children, virtually disappears with the introduction of the other variables. Perhaps the expectation that children will follow soon after marriage inhibits the employment of young married women. In contrast, the introduction of control variables raises the strength of being formerly married on modern sector employment.

The widest ethnic gap appears among single women. Chinese unmarried women are twenty percentage points more likely to work in the modern sector than their Malay and Indian counterparts (net of other variables). If there is a strong cultural difference in ethnic norms, it may be on the propriety of single women working in the modern sector.

Conclusions

How does the Malaysian data fit with the theoretical ideas expressed earlier, about the relationship between socioeconomic development and women's labor force participation. In general, one might conclude that the structural trends in Malaysian society during the 1960s seem to reflect the pattern of socioeconomic development implicit in the U-shaped curve of labor force participation. Overall there were gradual increases in women's labor force participation rates, which resulted from a combination of declines in agricultural employment and sizeable growth in non-agricultural employment, especially among younger women. Since the pattern is consistent with the growth of and direction of change in the Malaysian economy over the same period (Table 1), the modernization or industrialization hypothesis appears to fit.

But looking at the process in more detail, particularly ethnic variations, other patterns appear. Malay employment in agriculture, among middle aged women, appears to have increased during the 1957-1970 intercensal period. We suspect that this is due to an underestimate of unpaid family workers in agriculture in the 1957 Census, but cannot definitely rule out other explanations. The trends in Chinese female labor force activity seem to most closely fit the developmental model. As the most urbanized ethnic community in Peninsular Malaysia, Chinese women may be the most likely group to respond to changing socioeconomic opportunities. The most dramatic change during the 1960s was the decline of labor force activities of Indian women, entirely in agricultural employment. As the plantation sector divested itself of a substantial share of its workforce, agricultural employment rates of rural Indian women were cut by almost half. Since this occurred at all age groups, it is unlikely that natural attrition of workers can account for this downward trend. Of course, no developmental explanation is relevant here, but rather one must turn to the changing structure of plantation agriculture. An inquiry into the factors behind these changes is beyond the scope of this paper. But it should be noted that slow overall changes may mask rather amazing changes among sub-groups of the population.

The cross-sectional analysis of social background characteristics and type of employment in 1970 strengthens the interpretation of the trend analysis. Rural residence, low education, and a married status are the characteristics associated with employment in agriculture, both in the traditional and modern sectors. The opposite characteristics, those linked to economic development, such as higher education, urban

residence, and delayed marriage are associated with employment in the modern non-agricultural sector. These findings clearly suggest that the winds of social change are evident and women are responding to the emerging employment opportunities. We are unable to sort out the relative influence of greater opportunities, increased career orientations, and growing social acceptance of women working, but we think that all are probably intertwined in the process of social change.

For each ethnic community, the general pattern of relationships held, though there were differences in absolute level of employment. Within values of education, residence, and marital/family status, the differences between Malay and Indian employment in the modern sector were minimal. But Chinese women did have higher values, especially for those with a secondary education and among single women.

The interpretation of the different ethnic levels of labor force activity, while socioeconomic factors are held constant, is problematic. It is tempting to interpret all net ethnic differences as due to culture orientations. For instance, one might conclude that Malay culture or Indian culture inhibits the role of young single women outside the household, relative to the modern cultural values of the Chinese community. While we cannot ignore the possibility of this interpretation, we also note that differential opportunities for employment may still be an important factor in accounting for ethnic differences, even if educational and urban-rural variations are held constant. Moreover, our longitudinal analysis suggests that there are common trends across ethnic groups. To the extent that cultural values still affect women's economic roles, they may be declining in importance as the similar socioeconomic conditions affect all women.

NOTES

[1] This research was supported by a grant, "Social Change and Ethnic Inequality in Malaysia" (MH 30663-1) from the National Institute of Mental Health. The authors gratefully acknowledge the cooperation of the Malaysian Department of Statistics, especially Mr. R. Chander and Ms. Dorothy Fernandez, in making the 1970 Census data available. We also appreciate the valuable comments on an earlier draft by Avery Guest and Lenore Manderson, and thank Teresa Dark for typing the manuscript.

[2] For a review of the recent literature on this topic, see William P. McGrevey et al., The Policy Relevance of Recent Social Research on Fertility, (Washington, D.C.: Interdisciplinary Communications Program, Smithsonian Institution, 1974), pp. 20-23.

[3] For an examination of the historical trend in the United States, see John D. Durand, The Labor Force in the United States 1890-1960, (New York: Gordon and Breach, 1968, original edition 1948), pp. 23-28, and Valerie Kincade Oppenheimer, The Female Labor Force in the United States, Population Monograph Series, No.5, (Berkeley: University of California, Institute of International Studies, 1970), Chapter 1. Durand concludes that one cannot make a consistent generalization about the trend in women's labor force participation of Western industrial nations, see John D. Durand, The Labor Force in Economic Development, (Princeton: Princeton University Press, 1975), p. 123.

[4] For instance, see H. Wilensky, "Women's Work: Economic Growth, Ideology and Social Structure," Industrial Relations, 7 (May, 1965): 235-248, and H. Collver and E. Langlois, "The Female Labor Force in Metropolitan Areas: An International Comparison," Economic Development and Cultural Change, 10 (July 1962): 367-385. The interpretation in these articles is not simply that women's labor force participation is a response to economic development, but that it is an important factor.

[5] See John D. Durand, The Labor Force in Economic Development, p. 131. This hypothesis was forst introduced in J. N. Sinha, "Dynamics of Female Participation in Economic Activity in a Developing Economy," United Nations World Population Conference, 1965 WPC/285, Session A.5 (mimeographed).

[6] Nadia Haggag Yousseff, Women and Work in Developing Societies, Population Monograph Series, No.15. (Berkeley: University of California, Institute for International Studies, 1974), Chapter Two; also see studies cited in Note 4.

[7] John D. Durand, op.cit., p.138.

[8] Nadia Haggag Yousseff, op.cit.

[9] Department of Statistics, Malaysia, 1970 Population and Housing Census of Malaysia: Community Groups, by R. Chander. (Kuala Lumpur: Department of Statistics, 1972), p. 45.

[10] World Bank, World Tables, 1976 (Baltimore: Johns Hopkins, 1976): 498.

[11] David Lim, Economic Growth and Development in West Malaysia: 1947-1970 (Kuala Lumpur: Oxford University Press, 1973).

[12] Charles Hirschman, "Recent Urbanization Trends in Peninsular Malaysia," Demography, 13 (November, 1976), Table 3.

[13] Charles Hirschman, Ethnic and Social Stratification in Peninsular Malaysia (Washington, D.C.: American Sociological Association, 1975).

[14] Gavin Jones, "Female Participation in the Labor Force in a Plural Economy: The Malayan Example," Malayan Economic Review, 10 (October, 1965): 61-82.

[15] Monica Fong, "Female Labor Force Participation in a Modernizing Society: Malaya and Singapore, 1921-1957." Papers of the East-West Population Institute, No.34. (Honolulu, Hawaii: East West Center, 1975).

[16] Department of Statistics, Federation of Malaya, 1957 Population Census of the Federation of Malaya: Report No.14, by H. Fell. (Kuala Lumpur: Department of Statistics, 1960). There are also a series of 1957 Census reports for each state.

[17] The sample tape was constructed by systematically selecting every fiftieth household from the master file of 1970 Census of Peninsular Malaysia. The tape is available to academic researchers for specific research projects from the Chief Statistician, Department of Statistics, Malaysia. The publications from the 1970 Census include several national and state level reports under the general title, 1970 Population and Housing Census of Malaysia.

[18] For the 1957 Census, see United Nations, "Evaluation of the Population Census Data of Malaya," United Nations Bulletin for Asia and the Far East 13, No.2. (1962):23-44, and for the 1970 Census, see Department of Statistics, Malaysia, An Interim Report on the Post-Enumeration Survey, (Kuala Lumpur: Department of Statistics, 1974).

[19] Department of Statistics, Federation of Malaya, op.cit., p.24.

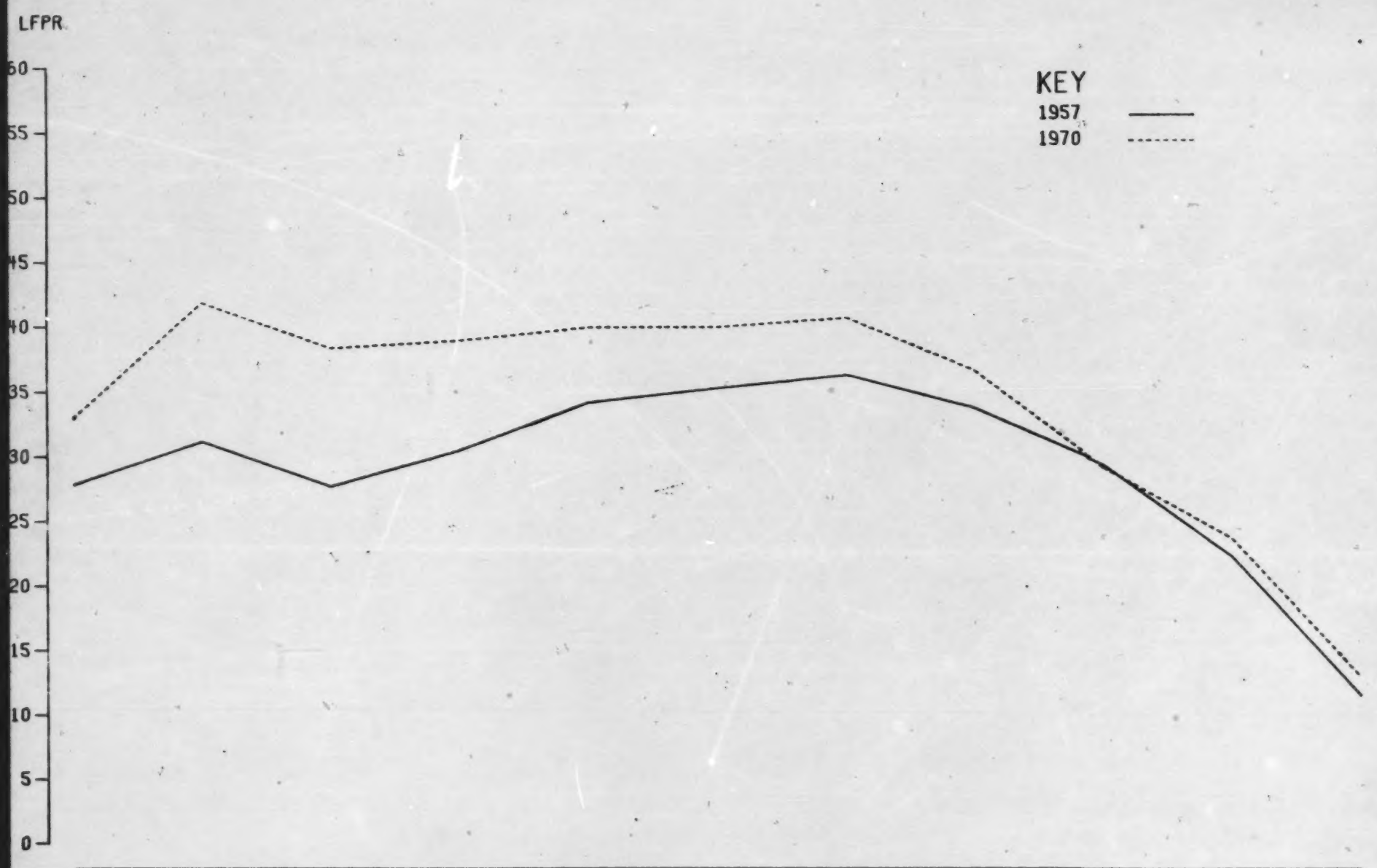
[20] Gavin Jones, op.cit., p.68.

[21] There was a sharp rise in the average age at marriage, and a consequent decline in fertility among young women in all ethnic communities from 1957 to 1970, see Charles Hirschman, "The Decline of Fertility in Peninsular Malaysia," Unpublished paper. Department of Sociology, Duke University, 1978.

[22] Second Malaysia Plan 1971-1975, (Kuala Lumpur: Government Printer, 1971), p.97.

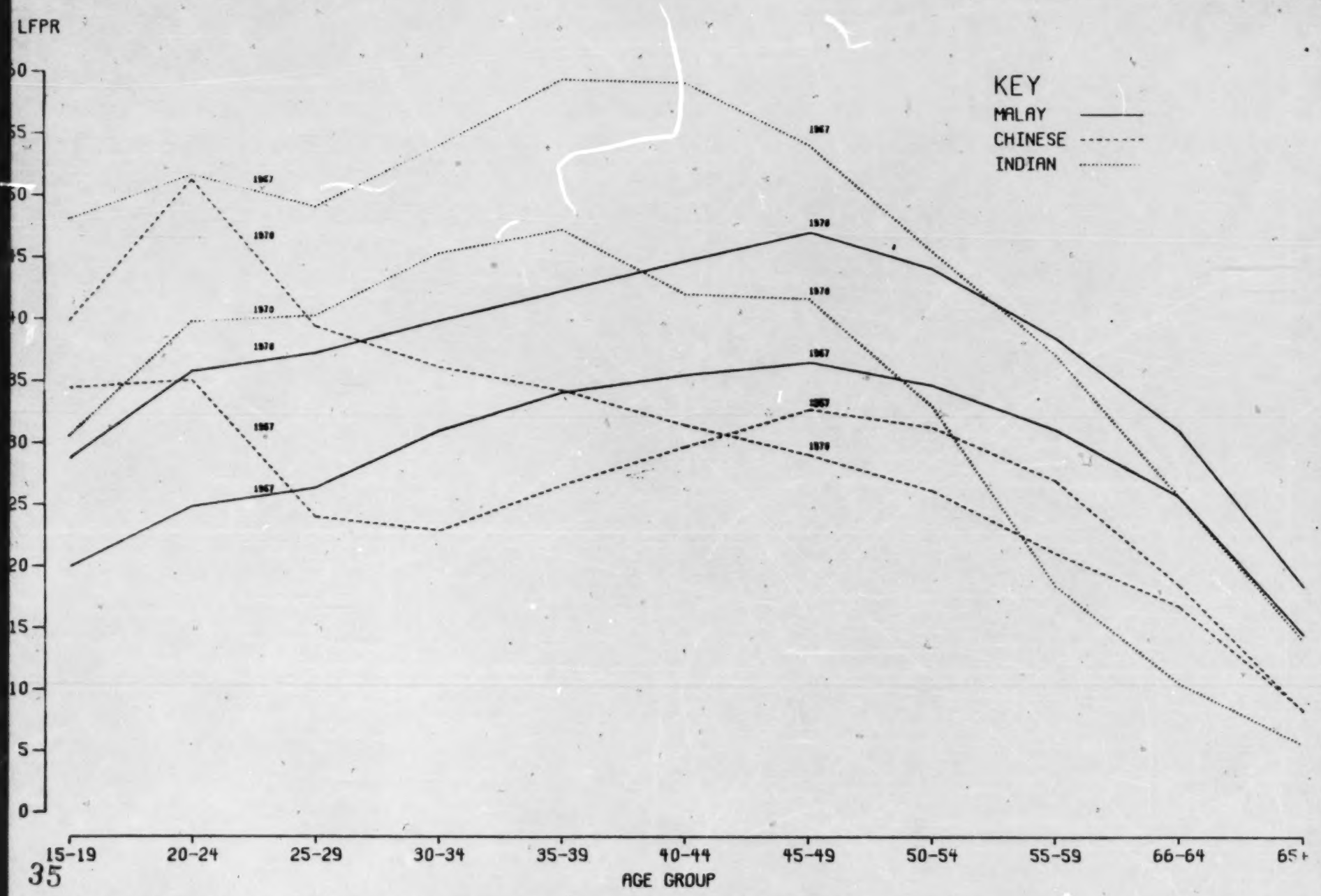
[23] Charles Hirschman, "Net External Migration From Peninsular Malaysia, 1957 to 1970," Malayan Economic Review, 20 (October, 1975):38-54.

FIGURE 1 LABOR FORCE PARTICIPATION RATES OF WOMEN BY AGE: PENINSULAR MALAYSIA, 1957 AND 1970



SOURCE: DEPARTMENT OF STATISTICS, MALAYSIA, 1970 POPULATION CENSUS OF MALAYSIA, GENERAL REPORT, VOLUME 1 BY R. CHANDER (KUALA LUMPUR: DEPARTMENT OF STATISTICS, 1977), P. 416

FIGURE 2 LABOR FORCE PARTICIPATION RATES OF WOMEN, BY ETHNIC COMMUNITY AND AGE GROUPS: PENINSULAR MALAYSIA, 1957 AND 1970.



SOURCE: DEPARTMENT OF STATISTICS, MALAYSIA, 1970 POPULATION CENSUS OF MALAYSIA, GENERAL REPORT, VOLUME 1 BY R. CHANDER (KUALA LUMPUR: DEPARTMENT OF STATISTICS, 1977), P. 416

Table 1. Gross Domestic Product[1] By Industrial Origin, Peninsular Malaysia, 1960-1970

Industrial Origin	GDP-1960		GDP-1970		1960-1970
	M$	%	M$	%	% Growth
Agriculture	$2,013	41	$2,428	29	21
Mining	301	6	548	7	82
Manufacturing	425	9	1,254	15	195
Construction	149	3	290	3	95
Services	2,074	42	3,832	46	85
TOTAL GDP	$4,962	100	$8,352	100	68

[1] In millions of current Malaysian $. There was minimal inflation in Malaysia from 1960 to 1970, see Department of Statistics, Malaysia, Consumer Price Index for West Malaysia (Kuala Lumpur: Department of Statistics, 1972).

Sources: Department of Statistics, Malaysia, National Accounts of West Malaysia, 1960-68, (Kuala Lumpur: Department of Statistics, 1972):18.

The Treasury, Malaysia, Economic Report, 1974-75 (Kuala Lumpur: Government Printer, 1974):vi-vii.

Table 2. Some Selected Demographic and Socioeconomic Characteristics of the Plural Society of Peninsular Malaysia, 1970

	Total Population	Malay	Chinese	Indian
Population (000)[a]	8,810	4,672	3,131	936
Ethnic Composition[a]	100.0%	53.0%	35.5%	10.6%
% born in Malaysia or Singapore[b]	89.9	98.1	82.8	75.0
% in towns of 10,000 or more[c]	28.7	14.9	47.4	34.7
% of Population, age 25 and over, who have completed primary schooling[b]	24.6	21.6	27.3	28.1
% of Men in the Experienced Labor Force in the Agricultural Sector[b]	47.3	63.2	27.2	38.8
Infant Mortality Rate[d]	40.8	47.6	28.5	46.0
Mean Household Income[e] (in M $ per month)	$269	$179	$387	$310

Sources: [a]Department of Statistics, Malaysia, 1970 Population and Housing Census of Malaysia: Age Distributions, by R. Chander (Kuala Lumpur: Department of Statistics, 1973): 93-97.

[b]1970 Population and Housing Census of Malaysia, .02 Sample Tape.

[c]Department of Statistics, Malaysia, 1970 Population and Housing Census of Malaysia: Community Groups, by R. Chander (Kuala Lumpur: Department of Statistics, 1972): 207-283.

[d]Department of Statistics, Malaysia, Vital Statistics, 1972 (Kuala Lumpur: Department of Statistics, 1974): 133.

[e]Malaysia, Mid-Term Review of the Second Malaysia Plan 1971-1975 (Kuala Lumpur: Government Printer, 1973): 4.

Table 3. Percentage of Women Employed in Agricultural and Non-Agricultural Activities, By Age Group and Ethnic Community: Peninsular Malaysia, 1957 and 1970.

Age-Group	1957								1970							
	% Employed in Agriculture				% Employed in Non-Agriculture				% Employed in Agriculture				% Employed in Non-Agriculture			
	Total	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total	Malay	Chinese	Indian
10-14	6	4	6	14	1	0	2	1	3	4	3	2	2	1	3	2
15-19	21	17	21	45	6	2	12	2	15	15	14	16	11	6	20	5
20-24	23	21	18	47	8	3	16	4	20	21	16	27	18	10	32	10
25-34	23	25	14	45	6	3	10	6	23	28	15	30	14	9	21	10
35-44	27	31	17	52	7	4	11	7	28	36	15	34	10	6	15	9
45-54	26	31	18	43	9	5	14	7	27	36	12	28	10	7	14	8
55-64	18	23	12	25	8	5	11	8	16	25	7	10	7	6	9	6
65 and above	7	11	3	9	4	3	4	4	8	14	2	2	4	4	4	1
Total, 10 and above	20	21	14	40	6	3	10	5	18	22	11	20	10	6	16	6
Total, 15-64	23	25	17	46	7	3	12	5	22	27	14	25	12	8	20	8

Age-Group	% Point Change in Employment, 1957-1970							
	Agriculture				Non-Agriculture			
	Total	Malay	Chinese	Indian	Total	Malay	Chinese	Indian
10-14	- 3	0	- 3	-12	1	1	1	1
15-19	- 6	- 2	- 7	-29	5	4	8	3
20-24	- 3	0	- 2	-20	10	7	16	6
25-34	0	3	1	-15	8	6	11	4
35-44	1	5	- 2	-18	3	2	4	2
45-54	1	5	- 6	-15	1	2	0	1
55-64	- 2	2	- 5	-15	- 1	1	- 2	- 2
65 and above	1	3	- 1	- 7	0	1	0	- 3
Total, 10 and above	- 2	1	- 3	-20	4	3	6	1
Total, 15-64	- 1	2	- 3	-21	5	5	8	3

Source: Department of Statistics, Federation of Malaya 1957 Population Census of the Federation of Malaya Report No.14, By H. Fell. (Kuala Lumpur Department of Statistics, 1960), pp. 123-126; and
.02 Sample of the 1970 Population Census of Peninsular Malaysia.

Table 4. Percentage of Women, Age 15-64, Employed in the Traditional and Modern Sectors of Agriculture and Non-Agriculture by Selected Social Characteristics: Peninsular Malaysia, 1970

Independent Variables	Percentage of Women Employed in: Total Employed	Agriculture: Traditional	Agriculture: Modern	Non-Agriculture: Traditional	Non-Agriculture: Modern	Percent of All Women
Ethnic Community						
Malay	35	21	6	3	5	53
Chinese	34	6	8	5	15	36
Indian	33	2	24	1	7	10
Other	39	23	1	3	12	1
Educational Attainment						
None	38	19	11	4	4	44
Primary (1-6)	32	11	9	4	8	41
Lower Secondary (7-9)	18	2	2	2	12	6
LCE or Above (9+)	40	1	1	2	35	9
Size of Place of Residence						
75,000 or more	27	0	1	4	22	18
10,000 - 74,999	26	3	4	5	14	12
1,000 - 9,999	32	9	10	5	8	13
Less than 1,000	40	21	12	3	4	57
Marital/Family Status						
Never Married	37	7	7	4	19	27
Married, No Children	34	16	7	3	8	4
Married, With Children	32	15	9	3	5	59
Formerly Married	38	18	8	5	7	10
All Women	34	13	9	3	9	100
(Sample Size)						(43,907)

Notes: Traditional is measured by those whose employment status is own account worker or unpaid family worker.

Modern is measured by those whose employment status is employee or employer.

Source: .02 Sample of the 1970 Population Census of Peninsular Malaysia.

Table 5. Gross and Net Effects of Selected Social Characteristics on the Proportion of Women, Age 15-64 and Post-Enrolled, Employed in the Modern Non-Agricultural Sector, by Ethnic Community: Peninsular Malaysia, 1970

Independent Variables	Percentage of Women Employed in the Modern Non-Agricultural Sector							
	Total Women		Malay		Chinese		Indian	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Educational Attainment								
None	5	7	2	3	7	11	4	5
Primary	9	8	5	4	14	13	5	5
Lower Secondary	19	13	12	8	26	19	8	6
LCE or Above	51	44	43	38	61	53	38	34
Eta/Beta	.38	.30	.37	.32	.40	.31	.35	.30
Size of Place of Residence								
75,000 or more	24	20	21	18	26	23	16	13
10,000 - 74,999	15	14	12	11	17	16	11	10
1,000 - 9,999	10	10	8	7	9	11	8	8
Less than 1,000	5	6	3	3	8	11	3	4
Eta/Beta	.24	.17	.24	.17	.21	.14	.21	.14
Marital/Family Status								
Never Married	26	21	14	9	34	29	13	11
Married, No Children	9	8	5	5	14	10	9	7
Married, With Children	5	7	3	4	8	9	5	5
Formerly Married	9	12	5	7	11	14	10	11
Eta/Beta	.27	.19	.19	.11	.32	.25	.14	.11
Total Variance Explained (R^2)		21		18		23		15
(Sample Size)	(35,208)		(21,800)		(14,839)		(4,049)	

Note: The effects of each independent variable, gross and net, are statistically significant at the .01 level.

Source: .02 Sample of the 1970 Census of Population of Peninsular Malaysia.